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SUPPLEMENT TO
BIEINNIAL REPORT

STATEMENT

—BY—

DR. A. F. WOODS

PRESIDENT MARYLAND STATE COLLEGE

IN REGARD TO

THE DEVELOPMENT OF MARYLAND'S AGRICULTURAL AND INDUSTRIAL RESOURCES BY MEANS OF APPROPRIATIONS

—TO—

THE STATE BOARD OF AGRICULTURE

THE MARYLAND STATE COLLEGE

THE EXPERIMENT STATION

THE EXTENSION SERVICE

THE INSPECTION AND CONTROL WORK

—BY—

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What the State College Is Asking For.

The General Assembly of Maryland at its present session is asked to provide for work under the direction of the Trustees of the Maryland State College of Agriculture and the State Board of Agriculture the sum of \$1,687,286 for maintenance, and the further sum of \$1,519,900 for land, buildings and equipment, etc., a total of \$3,207,186 for the years of 1921 and 1922. This total represents an increase of \$2,649,823 over the amount of \$557,358 appropriated for the years 1919 and 1920.

The tax payers of the State have a legitimate right to inquire why such an amount is requested at the present time. Following are reasons why the appropriation is deemed necessary:

Will Develop the State's Resources.

The fundamental reason for the appropriation is that it will be expended primarily for the development of the agricultural and industrial resources of the State. The fact must be borne in mind that Maryland is an agricultural State. Nearly one-half of our population is engaged in agricultural pursuits. Many of the other half are dependent upon agricultural development for the prosperity of their business. Most of the towns have been built and are supported by agriculture. A large volume of the business of Baltimore City is directly dependent upon the farm. A large proportion of the raw material used in her factories comes from the farm. It is, therefore, evident that the well-being and development of agriculture is of vital importance to all of our people, urban as well as rural. And that which is true of agriculture also is true of the State's water and mining industries, though, perhaps, in a somewhat less measure.

Possibilities of Agricultural Development in Maryland Practically Unlimited.

Of the 5,000,000 acres included in Maryland farms, only about 3,000,000 acres are now under cultivation. Hundreds of thousands of acres of untilled land in this State could be made productive, with the result that every phase of our industrial life should be more prosperous.

The soil is Maryland's greatest undeveloped resource. Its development can be accomplished only through a broad, thoroughly organized and far-reaching system of agricultural instruction, investigation and demonstration. The net returns from Maryland's 50,000 farms can be doubled. For instance, an increase of one bushel of corn per acre from the 693,000 acres devoted to this crop in 1919 would return more than \$1,000,000 increased income to Maryland farmers. An increase of one bushel of wheat per acre from the 790,000 acres devoted to this crop in 1919 would yield over \$1,500,000 in increased income to our farmers.

One pint increase of milk per cow per day would yield the dairy-men of this State over a million dollars of additional income from their labor. Unused land could be turned into pastures that would easily feed half a million more sheep than are now in the State.

Although Maryland is a great fruit State, she can be made the greatest fruit State in the East, and the value of thousands of acres of unused lands can be multiplied manyfold.

There are within 200 miles of Maryland, 10,000,000 people to consume the products of the farm, including small fruits, truck and vegetable crops.

At a time when the cost of living has reached unheard of altitudes, every citizen is vitally interested in any measure that may increase production of food crops. The State College is the agency, established by authority of the State, to accomplish this end.

Money Appropriated for Agricultural Development Is a Safe and Profitable Investment.

Actual experience has demonstrated that the possibilities of Maryland's agriculture can be realized. Wheat growers under the direction of the State College, by using improved seed and following approved methods, have increased their yields of wheat as much as six bushels per acre over the yield from other unimproved varieties. On the basis of the State's total acreage in 1919, such an increase would have netted the wheat growers of the State more than \$9,000,000 in one year.

In 1919, nine fruit growers, by the expenditure of \$4253.65 in properly spraying their peach and apple trees under the direction of specialists from the State College, received from their crops \$48,818.83 over and above the cost of spraying the trees. The percentage of perfect fruit from these trees was 88%, while the unsprayed trees yielded only 24%.

In 1919 a strawberry grower in Somerset county who conducted demonstrations in dusting his plants received \$508 more for the fruit from the acre that was dusted than from an acre that was not dusted. The cost of dusting, including all charges, was \$20.50, making a net return of \$488.25 in favor of dusting.

A similar demonstration in Caroline county yielded a net return in favor dusting of \$379.50.

Another grower in Somerset county who had 12 acres in strawberries sold 1800 crates for \$15,300. He estimates an increase in yield of 30 per cent. due to dusting. Counting the cost of dusting at \$200, he estimates his net returns from his dusting operations at \$4300.

A score of other growers, carrying on demonstrations under the direction of county agents and State College specialists, reported increases in crop yield, due to dusting, of from 30 per cent. to 100 per cent.

The college records show many examples of increased yields from farm crops, control of disease in plants and livestock, and larger net returns from dairying and other branches of animal husbandry by following scientific methods of agriculture recommended by the State College.

The State Can Well Afford to Build Up Its State College.

The State College is the logical leader in the agricultural development of the State. The State can well afford to appropriate funds for the upbuilding of an institution capable of such effective leadership. It will prove a safe and profitable investment.

It was through the efforts of the University of Wisconsin that Wisconsin developed into the great dairying State that it is. After New York soil became depleted through mismanagement, Cornell University, through its College of Agriculture, *made* the horticultural interests of the Empire State what they are. Ohio and Iowa became leaders in livestock production largely through the efforts of their Colleges of Agriculture. The millions appropriated by these States to their State Colleges have been returned a hundredfold in increased return from their agriculture and in enhanced value of their farms.

State Roads Are Profitable Investment.

Within ten years the Maryland Legislature has authorized the expenditure of \$34,000,000 upon our State road system. It is a fine system, and the pride of every Marylander. It has proved to be an exceedingly profitable investment for the State.

But in the past 63 years, the State of Maryland has spent but little over \$1,000,000 for the advancement of agriculture through appropriations to the State College. Other States have built up their State Colleges along with or in advance of the development of their State roads. Let Maryland build up a great State College to compare with her great road system. It will prove just as good an investment.

The Appropriations Requested Have Already Been Earned.

As a matter of record, the appropriations asked for have already been earned as is shown by the following figures:

The average yield of corn per acre from 1880-1889 in Maryland was 24.2 bushels; the average yield in 1910-1919 was 36.5 bushels, an increase of 12.3 bushels. On the basis of 693,000 acres of corn grown in Maryland in 1919, this means an increase of \$11,933,000 this year over the yield for the same acreage in 1880-1889.

The increase in the average yield of wheat in the same period was 3.8 bushels per acre. On a basis of 790,000 acres of the 1919 crop, this would result in an increase of \$6,454,000 to the wheat growers of the State for this year over the yield for 1880-1889.

Taking oats, rye, barley, buckwheat, potatoes, hay and tobacco together with corn and wheat, the total increase of these nine principal crops of the State on our 1919 acreage amounts to \$22,361,480 per year more than they averaged in 1880-1889.

State College Responsible for Crop Improvement.

If only one-tenth of the improvement in the nine principal crops grown in this State could be ascribed to the influence of the State College since the establishment of the Experiment Station in 1889, and the receipt by the College of the grants of funds under the Second Morril Act in 1892, it would represent over \$2,000,000 in one year, or more than the entire amount that has been granted to the College and Experiment Station since the foundation of the College 63 years ago.

It is, therefore, evident that on the basis of dollars and cents the State College has already proved that it is a good investment for the State, and has already returned to the State more than the State has spent for its support and much more than is now being asked for to place it on a plane of efficiency, which it is not possible to attain with the present meager support.

Development of Water Resources.

Work has been initiated at the college looking toward the development of the State's water resources, and results of investigation and research in this fertile field should be just as productive as investigation and research in agriculture already have proved. Maryland's water resources constitute a vast asset, and money expended by the Legislature to carry out a policy of conservation and development of them should be returned dollars for dimes.

In co-operation with the Maryland Conservation Commission the State College has been conducting investigations and surveys, and is at present offering a series of lectures covering the general field of aquiculture. The United States Fish Commission is at present considering the establishment of experimental fish hatcheries at the College, and such a project should present invaluable data concerning the development of the water areas. The State College is co-operating with State and Federal agencies in their attempts to arouse active interest in the development of the vast resources of the bay and its tributaries.

And it seems not amiss to state here that the College has been unable to meet demands for aid from one of the State's greatest industries—mining—because it has had no funds with which to develop such work. Not a home, not a business, not another industry in the State that is not directly affected by the production of coal, and the people have a right to demand that their State College, especially charged under the Morrill Act with the development of

the State's resources, be in a position to render whatever aid may be required in the attempt to solve some of the great problems incident thereto.

Money Invested for the Scientific and Technical Training of Maryland Young Men and Women Produces Large Returns.

Maryland is fast becoming an industrial center. Large industries are constantly being added to the great number that already flourish in Baltimore and other towns. In addition, Cumberland, Hagerstown, Frederick, Easton, Cambridge and Salisbury and other towns are rapidly expanding the scope of their industrial horizon. As a result, the demand for technically trained men and women is growing daily.

Maryland boys and girls are receiving at the State College the training that fits them for service in the industrial field, and the graduates of the State College are to be found almost everywhere and in all professions.

Noting only those holding official positions based on technical training, graduates of the institution are rendering service in Maryland as follows:

State Forester, Chief Engineer State Highway Commission, Engineer for Baltimore City Sewerage Commission, Engineers for the Baltimore City Paving Commission, County Engineers, State Entomologist, State Horticulturist, Director of Extension Service, Teachers of Manual Training and Agriculture in Public High Schools, Members of the Faculty of the State College, County Agents, Specialists in the Extension Service, Principals and Instructors in general subjects in High Schools and Academies of the State, Officers of the National Guard, etc.

In the United States Department of Agriculture, Maryland State graduates occupy positions as follows: Three chiefs of division in the Bureau of Chemistry, Chemist in Charge of Meat Inspection and Assistant Chemists in same division, Specialists in Bureau of Entomology, Chief Inspector for the United States Horticultural Board, Chemists in Charge of Cereal Investigations, citrus by-products, etc., Specialists in Bureau of Animal Industry.

In the nation at large Maryland State graduates occupy positions on the faculties of such institutions as follow: West Virginia University, Columbia University, University of Georgia, North Carolina State College, New York University, University of Maryland, Iowa State College, University of Wisconsin, University of Porto Rico, Christian Brothers College of California, University of Arkansas, George Washington University, Oregon Agricultural College, University of Pennsylvania, Cornell University, Albright College, Roanoke College, etc., and fill technical positions such as State Entomologist, North Carolina; State Highway Engineer of Wisconsin, State Entomologist of Arkansas, Secretary Bureau of Irrigation of

New Mexico, Surveyor of the District of Columbia, Chemist for the State of Virginia, Engineer United States Geological Survey, while scores of Maryland State men were commissioned officers of the United States Army, Navy, Coast Guard and Marine Corps.

No mention is made here of the many who are scattered throughout the world as employees in the Engineering or Chemical Departments of great industrial organizations and as specialists in various lines of agriculture.

What Other States Have Done for the Support of Their State Colleges, Including the Experiment Stations and Extension Service.

When the support given to the Maryland State College, including the Experiment Station and Extension Service, is compared with that granted to the State colleges of other States, the ultra-conservative policy of Maryland is evident, as is shown by the following figures, supplied by the United States Bureau of Education:

Colleges	Value of College Plant and Equipment	Annual Appropriation Since 1909 (average)	Total Appropriations Since 1909	Per Capita 1910 Census
West Virginia	\$1,516,000	\$263,774.44	\$2,373,970.00	\$1.94
Massachusetts	2,075,943	363,105.44	3,267,949.00	.98
Kansas	2,648,317	516,260.00	4,646,342.00	2.63
Pennsylvania	3,541,569	427,766.00	3,849,896.00	.50
Nebraska	4,886,012	794,925.00	7,154,328.00	6.00
Ohio	7,813,121	1,053,394.00	9,498,550.00	1.99
Wisconsin	9,503,693	1,627,094.00	14,643,853.00	6.27
Maryland	820,665	102,108.43*	1,021,084.00*	.78

*These figures include about \$35,000 per year for the work of the Live Stock Sanitary Division. In the other States this work is carried on by Boards separate from the State College, and funds for it are not included in figures furnished above for other States.

Brief Outline of the Work of the College.

The Maryland State College of Agriculture is the successor of the Maryland Agriculture College, the second in the United States to be chartered. Although from the beginning it received some State aid, it was not a State institution, being under the control of a Board of Trustees independent of the State. It has always served, however, in the same relation to the State of Maryland as have the State colleges of other States, such as Iowa, Kansas, Wisconsin, Michigan, etc. By designation of the Legislative Assembly the College received the Government grants for agricultural education, known as the Morrill-Nelson Acts and the grants for research, known as the Hatch and Adams Acts. However, the small grants limited from year to year the scope of the work compared to the field covered by the more adequately supported institutions in other States.

State Takes Over the College.

To remedy this condition with a view to establishing a thoroughly efficient State agency of agricultural and industrial education and research, in association with the other phases of education, the State took over the Maryland Agricultural College and reorganized it under a new charter, which makes it possible, with adequate support, to develop the Maryland State College of Agriculture into an institution comparable to the higher educational institutions of the other States. Considerable progress has been made in this direction.

Scope of Work Demands Liberal Support.

The State College conducts three distinct lines of educational work—resident instruction, investigation, and extension and demonstration. A fourth division is that of regulatory work, which is conducted in part by the College and in part by the Live Stock Sanitary Section of the State Board.

It must be assumed that the State, in taking over the College, intended to have the institution develop to meet the growing needs of the time.

How the Work of the College Is Organized.

One of the necessary functions of the College is to provide adequate means for the proper education of the young men and women of the State. In order to carry out systematically this fundamental duty, the College has been organized into the following groups: School of Agriculture, School of Chemistry, School of Education, School of Engineering, School of Home Economics, School of Liberal Arts, Graduate School; and there is in process of organization a School of Veterinary Science and Medicine and other schools covering fields of importance to technical education and research.

The School of Agriculture.

This group includes the Divisions of Plant Industry and Animal Industry. The Plant Industry Division covers the works in Agronomy, Horticulture, Plant Morphology, Physiology and Pathology and Forestry. The Division of Animal Industry includes work in Animal Husbandry, Dairy Husbandry, Poultry Husbandry, Farm Management, Animal Pathology, Veterinary Medicine, Zoology, Entomology, etc.

The teaching of a rational, practical system of farming is the primary aim of the School of Agriculture. The curricula are planned to give the student a general knowledge of all phases of agriculture and related sciences, but at the same time to afford an opportunity to specialize along the line in which he is particularly interested. The plan provides for those who wish to take up some professional line, such as teaching, research, county agent work, as well as farming.

The School of Chemistry.

The School of Chemistry includes the Departments of General Chemistry, Industrial Chemistry, Biological Chemistry and the Department of Fertilizer and Food Analysis and Inspection.

It is the aim of the School of Chemistry to prepare students for practical work as research, general analytical and manufacturing chemists, or to be teachers.

The School of Education.

This school consists of an organization of the various activities of the College which are concerned with the professional preparation of teachers. Its courses are planned to serve three classes of students—first, those preparing to teach Agriculture, Home Economics, industrial and general subjects in secondary schools; second, prospective principals of High Schools, Educational Supervisors, County Agents, Home Demonstration Agents, Boys' and Girls' Club Leaders and other Extension Workers; third, those majoring in other lines who desire courses in Education and Psychology.

In addition to courses in General Education, Vocational courses are offered in Agricultural Education, Home Economics Education and Industrial Education.

The State College is designated by the State Board of Education and the Federal Vocational Board as the official agency charged with the conduct of teacher training in Maryland under the Smith-Hughes Act.

The School of Engineering.

The Engineering group includes Civil, Electrical, Mechanical and Rural Engineering and Mathematics and Physics. The State College was the first institution in the State of Maryland to organize a course in Engineering, having inaugurated the work in 1894 to comply with requirements of the Federal Government under the second Morrill Land Grant Act.

The Engineering courses are arranged with a view to preparing the students for immediate usefulness in the technical world. The school is organized to instruct students who desire to practice Engineering as a profession; and, second, to teach students interested in agriculture and applied science such branches of mechanic arts and engineering as will promote their individual interests. Instruction is given in certain subjects required under the provisions of the Smith-Hughes Act for the training of teachers in the industrial arts.

An opportunity is afforded each year for practicing road engineers to take an intensive course at the College in road building and maintenance.

Four-year courses are offered in Civil, Mechanical, Electrical and Rural Engineering. Option is offered in Civil Engineering to specialize in either highway or sanitary engineering.

The School of Home Economics.

This school includes the Departments of Foods and Cookery, Textiles and Clothing, Hygiene and Health and Institutional and Home Management.

The courses of instruction are planned to meet the needs of three classes of students: (1) Those who desire a knowledge of the general facts and principle of home economics. (2) Those students who wish to specialize in Home Economics. (3) Those interested in certain phases of home economics which deal with the work of the dietitian or institutional manager.

The School of Liberal Arts.

This group includes the Departments of Languages and Philosophy, English Language and Literature, History and Political Science, Economics, Journalism, Public Speaking, Library Science and Music.

The courses given in this school have for their prime object the offering of fundamental and specialized instruction in language, literature and social science. It aims to establish a foundation upon which to build technical and scientific education; to provide the basic preparation for business, law, journalism, administration, civil service or higher teaching positions, and to afford the opportunity for general cultivation and refinement of the mind. The curricula in this group are largely arranged according to the group elective system.

The Graduate School.

Graduate work is offered to graduates of this or other standard colleges who, in the judgment of the Dean of the Graduate School, are qualified to undertake that work. Advanced degrees conferred are Master of Science, Master of Arts and Doctor of Philosophy.

College Organized on a Broad Basis.

The organization of the academic work is thus planned upon a broad basis in accordance with the law creating the Land Grant Colleges by the Federal Government. The young men and women of Maryland have a right to expect their State College to be so organized, equipped and manned as to meet their needs for higher education in all its branches, such as is furnished by other States.

Maryland cannot afford to send her sons and daughters to other States because her own State College cannot accept them or is not equipped to give them the training they desire and yet nearly 200 young men of Maryland were turned away from the State College last fall on account of limited accommodations.

A detailed discussion of needs for equipment and buildings will be presented later.

Investigation.

Investigation in all fields of applied science is essential to education. The work of the Experiment Stations of the country was pre-eminent in developing modern scientific agriculture in both theory and practice. The Maryland Experiment Station, established in 1888, has produced results from its investigations of untold value to the farmers of the State. The investigational work in progress includes a study of the soils of the State and their adaptability to various crops; the use of lime, fertility investigations, methods for the control of insect pests and plant diseases, feeding animals for meat and dairy production, selection of varieties and cultural practice in raising fruit, vegetables and flowers, variety tests in wheat, soy beans and other crops. Agricultural research must be ahead of demands of the time.

While splendid results have been accomplished by our Station, there are innumerable agricultural problems that need solving. A study of many of these problems would extend over a period of years. The agricultural industry cannot afford to neglect agricultural research in these times when new methods in production, distribution and marketing are so important. Other fields of investigation in science, engineering, farm machinery, mining, agriculture, etc., present great possibilities for assisting these industries in the State.

Extension and Demonstration.

The aim of the extension and demonstration work is to carry the available information in agricultural science and home economics to farmers and home-makers by practical demonstrations on their farms and in their homes. This work is conducted in co-operation with the United States Department of Agriculture, and is accomplishing wonderful results in this State. It was through this well-organized division that the institution was able to carry the large amount of extra work thrust upon us by the State during the war period, and which has continued since the armistice. With a trained man and woman agent in each county we were able to conduct the special campaigns for production, and, with the generous response by the farmers, to make such a splendid agricultural war record for the State. Since the close of the war, on account of the reduction of Federal Emergency funds and State funds from the Council of Defense, the Extension Service has had great difficulty in meeting the demands of the people.

It is impossible to cite the magnitude of this work in the State. Suffice it to say that the people are demanding well-trained and experienced men and women, and all sections have come to realize the immense value of county agent work in promoting the development of agriculture and bettering rural life in the counties.

In addition, the Extension Service is furnishing facilities for presenting favorably to prospective settlers information concerning Maryland's agricultural possibilities and the advantages of locating in this State.

To meet the needs in different communities it has been necessary to emphasize extension in general education. The purpose of this work is to give information and assistance in subjects other than agriculture and home economics.

Through the Extension Service the College campus extends to every community of the State; through it the College is able to render service to the State at large.

Inspection and Control Work.

In the United States the annual toll by insects and diseases taken from farm crops, fruits, vegetables, etc., and, in addition, the loss due to diseases affecting livestock, amounts to millions. A conservative estimate of the loss due to these causes is 10 per cent. For Maryland farm crops, this would be \$13,274,000; for livestock, it would amount to \$5,670,000. Our annual loss to the dairy industry from disease, such as tuberculosis, amounts to \$1,560,000, while our loss in the swine industry, due to hog cholera, etc., is approximately \$850,000.

Much progress is being made in the control of diseases affecting both farm crops and animals. No argument is necessary to point out the necessity of the State doing everything in its power to prevent these enormous losses.

The control work of insects and diseases is conducted through the State Horticultural Department, while the control of animal diseases is conducted by the Livestock Sanitary Section of the State Board of Agriculture.

The fertilizer inspection work conducted by the School of Chemistry is of untold value to the farmers of the State. Likewise, the seed inspection means much to the State in protecting the quality of seed offered for sale. All phases of this regulatory work should be adequately provided for in order to protect the agricultural industry as far as possible from unnecessary losses.

The Present Condition of Buildings and Equipment Makes Appropriations Necessary.

A total of \$1,519,900 is requested for buildings, equipment and land at the State College. This seems a rather large sum, but when one considers the absolute needs existing at present, the request is more than justified. In the first place, it will be remembered that a request for a building program was submitted to the last Legislature, but in view of war conditions, the Board of Trustees voluntarily requested that such a building program be postponed.

The time has now arrived that additional buildings are an absolute necessity if the institution is to grow or even accommodate properly the students now attending the College. Moreover, the request for buildings is large by virtue of the inadequate provision made in previous years for the needs of the institution. The com-

parisons previously shown in the total amounts appropriated by this State with that of other States for this purpose explain the abnormal needs at this time.

Dormitories for Men Inadequate.

The present dormitory facilities are wholly inadequate. Calvert Hall is a modern dormitory built to accommodate 125 men. It has been necessary to crowd into it over double this number, and as many more have to find rooms at high cost and often long distances from the College. Many were turned away this year because no place to live could be found. The United States Government requested us to provide for 200 men wounded in the recent war who desired education in the fields represented by the College. Only about 40 of these could be taken because there was no place for them to live and no funds could be secured either from the State or Federal Government to erect a dormitory. To meet these conditions we are asking for a dormitory for men to accommodate 200 which will afford temporary relief. The cost of such a building and equipment will be \$160,000.

College Open to Women.

The new charter granted to the institution in 1914 provided that the opportunities given to the young women attending the College be equal to those given to men. A school of Home Economics has been organized. Only about 30 young women are attending the College, as this is all that can be accommodated under present conditions, and these are housed partly in a rented building away from the campus. We should have a suitable dormitory for women, and estimates have been prepared for such a building to cost \$108,000. Certainly no argument is necessary to persuade anyone that the State should have suitable accommodations for the large number of young women who are seeking advanced training in all branches of education. The proper education of our young women is unquestionably one of the primary duties of the State.

Dining Hall Needed.

The students must not only be housed, but they must be fed. The original dining hall was destroyed by fire a few years before the State took over the College and since that time a temporary wooden structure has taken its place. This was enlarged during the war by a temporary addition. The structure, however, does not meet the requirements of the situation. It should be replaced immediately by a properly constructed building and modern equipment. This will cost approximately \$170,000.

Armory and Gymnasium Required.

Mention has been made of the fact that the College rendered assistance to the nation during the war in the training of men for war service. The grants made by the general Government to the State for education required that the College should provide such training in military science as the War Department might demand. Maryland State College has met this requirement as far as possible with inadequate facilities. Recently Congress provided for the enlargement of this military training in the establishment of the Reserve Officers' Training Corps. Under this plan the students receive considerable assistance in the way of free uniforms and other equipment, and in the advanced work about \$12 per month additional. The military training in no way interferes with the other work of the schools, but it is a distinct help, as careful physical training is required. The War Department has turned over to the College about \$75,000 worth of equipment, which must be carefully guarded and cared for. At the present time there is no place to house properly and use this equipment or to conduct the military and physical training work on a basis satisfactory to the War Department. To provide for this need, an appropriation is requested to build a suitable gymnasium and armory. This will require \$190,000.

New Chemical Building Necessary.

The importance of chemistry in the industries has never been so fully recognized as today. It has important relationship to nearly every department of modern life. The demand for men trained in chemistry is especially strong from the industries, and many young men desire to prepare themselves to fill these places. The building used by the College for chemical teaching and fertilizer analysis is now altogether too small. It is not fireproof, and is not adapted to the requirements of the enlarged demands in these lines. A new building is urgently necessary, and will cost about \$160,000.

Farm Machinery Laboratory Required.

Farm machinery is now a subject that must be given much more attention in colleges of agriculture and engineering. It is an important factor in solving the farm-labor problem. Maryland has made a good start in this direction, but the College has no suitable building in which the work can be adequately carried on. An estimate of \$50,000 to cover the immediate needs has been included in the budget.

Central Heating Plant a Necessity.

All of these buildings must be heated. At the present time most of the College buildings are heated by individual plants. As the institution grows it will be desirable to centralize this work at a point where coal can be brought in in carload lots over a spur track from the railroad. Another very important factor is the reduction

of the fire risk. Provision for a central heating plant and conduits, with spur track connections with the railroad, is requested. The estimated cost is \$249,400.

An item is also included for the construction of sewers and for water mains and tank to meet the increased needs of the College, protect the health of the students and furnish additional fire protection. This item calls for \$64,000.

Buildings and Equipment for Veterinary Science.

The efficient control of animal diseases depends in a large measure upon the supply and skill of the veterinarians. Maryland has no college of veterinary medicine at the present time. The National Department of Agriculture has urged the Board to organize such a school in connection with the State College of Agriculture. The amount requested for this purpose is \$35,000 for buildings and equipment. The additional staff is included in the college budget.

Plant and Equipment for Dairy and Animal Husbandry Departments.

The general program also requires an efficient department of dairy and animal husbandry at the College. There is great need for additional livestock for general animal husbandry teaching. Steps have been taken to organize this work. First of all, there must be provided additional land, within easy reach of the classes, for the location of barns, paddocks, pastures and other necessary equipment, and for growing as much of the feed needed as practicable. This additional land, with the necessary barns and other equipment will cost about \$106,000, and a request for this has been included. This is an investment that will grow more valuable from year to year entirely aside from its educational value.

Summary of Building Program.

The above program for buildings is conservative, and provides for only the immediate needs of the institution. The new agricultural building completed in 1918 at a cost of \$174,000, the men's dormitory built from insurance funds following the fire, together with the Engineering Buildings, Science Hall, Library and other structures erected from time to time, including the Experiment Station buildings, are at present over crowded and inadequate to meet the needs of a growing institution.

The location of the College on a commanding hill near the Washington-Baltimore Boulevard, Washington Suburban Electric Railway and B. & O. Railroad offers a most favorable center around which to group the proposed new buildings to meet present needs. The institution has made a splendid record, and as already has been pointed out, its alumni can be found in places of great responsibility throughout the State and the Union. Aside from Maryland's duty

to its youth, and aside from the material returns that will come from money invested, the State's pride alone should prompt her to have equipment adequate to the needs of her citizens and comparable to that of other States.

The Increase in the Cost of Maintenance, Coupled With the Decreased Purchasing Power of Money, Necessitate Increased Appropriations.

The large reduction in the purchasing power of the dollar is felt to no greater degree in any business than in the conduct of a State institution with limited appropriations for certain purposes. The previous appropriations for maintenance during the past two years could not be increased to meet the largely expanded cost of materials, equipment, travel and general expenses. In order to continue the work of the institution in all phases of its activity upon the same basis as hertofore, a 50 per cent. increase in maintenance for the several divisions is necessary. In order to meet present high costs, the strictest economies have been practiced and yet the increased cost of travel, food, coal and every other article entering into the needs of the institution have had to be met.

Increased Salaries Necessary to Keep Good Men.

No class of men and women have suffered from the high cost of living to the same degree as teachers and college professors, specialists and others engaged in educational work. The strain upon the men at our institution who are forced to maintain certain standards of living, and who are subject to many miscellaneous demands in addition to ordinary living expenses, has been heavy. The average of the salaries paid to our specialists and instructors is below that paid by similar institutions. We must retain the competent men now connected with the College. In order to do so, we must increase our salary average. We have already lost a score of men in all divisions during the past two years because of salary limitations.

We believe the Maryland public demands the best available men to conduct the work of the institution. The reputation of the College is largely based upon the character of men who represent it. We cannot afford to be parsimonious or to practice the false economy of allowing our best men to leave the institution for want of a living wage.

The Expansion of the College and the Increased Demands Made Upon All Divisions of the Institution Require Larger Grants of Funds.

In an earlier part of this statement it was shown that the State of Maryland in the years 1910-1919 granted to the Maryland State College for all purposes the sum of \$1,021,084. Yet \$705,084,

or 69 per cent. of this sum was appropriated during the last three years, and of this latter sum \$174,000, or 24 per cent., was appropriated for an Agricultural Building. Had the policy of the State in the preceding years been more in accord with the policy of other States in supporting their State College the present congestion and overcrowding of the College in all of its departments would not exist. Our lecture-rooms and laboratories are filled to overflowing, and any expansion in the number of the students is prevented. Demands are made every day upon the several divisions of the institution which cannot be met because of limited funds.

The State College is under a mandate from the State to care for a wide range of work, and yet, unless the funds available for carrying on such work are greatly increased, the institution cannot adequately meet its obligations. The rendering of useful service to the people of the State invariably increases the demands for more and greater service. These demands constitute a valuable criterion by which to measure the usefulness of the College to the State. It is not fair or wise to limit the amount of such service that an institution can perform.

The People Want a State College Comparable With the Resources of the State and of a Rank Similar to Those of Other States.

The people of Maryland want a State College comparable to those of other States, and there is every reason why they should have it.

The Maryland State College is the only collegiate institution in the State owned by the State and controlled by the State. So long as the College remained a semi-private institution and the State did not own the property there was a natural hesitancy on the part of the members of the General Assembly to grant large sums of money for plant or equipment.

But when the State took over the College and made it the *State College* it assumed a responsibility which cannot be evaded. The College as a State-owned institution should logically be the crowning point of the State's public educational system. The people of the State want good public schools, good high schools and good normal schools. They also want the State institution for higher education to be as good in quality and as high in rank as the resources of the State will justify.

It has already been pointed out that other States of the Union have found great profit and satisfaction out of the development of their State Colleges. As a conspicuous example Kansas may be noted. The history of the remarkable progress of that State from actual poverty to unbounded prosperity is but the history of its educational development. The legislators of the State of Kansas invested millions in their State College. Through the agencies of the

College, thus made capable and efficient, hundreds of millions of dollars have been added to the wealth of the State. And the people of Kansas are proud of their College because it is worthy of the best traditions of the State.

Under the liberal and enlightened spirit which animated the policy of the Legislature of Kansas towards its State College, Maryland may have, and the people of the State desire her to have, an institution which, in plant, equipment and ability to serve her people, will rank with Michigan, Pennsylvania, Cornell, Kansas or Wisconsin.

SPECIAL PROJECTS.

Livestock Sanitary Service.

The profitable growing of livestock depends in a large measure upon the control of such diseases as tuberculosis, glanders, hog cholera, etc. The State has organized an efficient service to study and control diseases. It is under the State Board of Agriculture, and is known as the Livestock Sanitary Service. In co-operation with the Bureau of Animal Industry of the United States Department of Agriculture, this service is engaged in eradicating these diseases. Every dollar efficiently devoted to this work comes back in larger and more economical production. The Board of Agriculture is asking for the next two years for the conduct of this work, including hog cholera eradication and the indemnities that must be paid where animals are destroyed to prevent the spread of infection, \$331,000.

Dairy Inspection Service.

The Board of Agriculture has been requested by the Maryland Commission appointed by the Governor to control the cost of necessities of life and prevent profiteering, to co-operate in an attempt to improve the conditions controlling the milk supply. Many phases of this work were already in progress under the direction of the Board in co-operation with the Women's Civic League and other similar agencies, including the Dairymen's Association, the milk distributors and others. One of the most needful things not being attended to properly on account of lack of funds is the dairy inspection work upon which the sanitary qualities of the milk depend. The State Board of Health and Municipal Boards of Health, as well as the State Board of Agriculture, are involved in this problem, and their co-operation in working out a comprehensive and efficient co-operative inspection service has been requested. The State Board has requested \$105,000 to meet its share of this work for the next two years.

Marketing.

An item of \$10,000 is requested in the budget to provide for marketing investigations and demonstrations. With limited funds at its disposal the College has conducted a number of investigations of the systems of marketing perishable farm crops in several parts of the State and in Baltimore City. Farmers have been assisted in co-operative marketing of farm products and in purchasing farm equipment and supplies to the extent of millions of dollars during the past year. It is evident that there is much room for improvement in the general marketing of farm products, including production, grading, packing and distribution of perishable products; and additional investigation is needed in order that hasty and ill-considered action in dealing with this large problem may not be taken. Every legitimate effort should be made to reduce the costs in marketing to both producer and consumer.

Beekeeping.

Beekeeping is becoming an important industry in Maryland. At a time when the price of sugar has increased from 200 per cent. to 300 per cent. above pre-war figures, the encouragement of honey production is worthy of consideration.

Through the State Beekeepers' Association much assistance and encouragement has been extended to the industry. In order that the diseases and pests that threaten the progress of beekeeping may be controlled the Legislature is asked to provide \$3000 for adequate inspection of bees and the encouragement of beekeeping in the State.

The Eastern Branch of the College.

The Morrill Acts, making grants to the States for agricultural and trade and industrial education, provided that a certain amount of the grants should go for the education of the colored race. A branch of Morgan College, at Princess Anne, Maryland, was early designated to receive the grant and to conduct this work under the supervision of the Maryland State College of Agriculture, and was designated the Eastern Branch of that college. The arrangement was continued under the new charter and steps were taken two years ago to enlarge the work and to make the institution in fact an efficient agent to provide for the colored people the type of education contemplated by the Morrill Act. While the trustees of Morgan College have given every possible assistance in developing this school, sufficient funds have not been available to enable it to render the service to the colored people of the State that it designed to render. When the Maryland Agricultural College was reorganized as a State institution, steps were taken to improve the Eastern Branch. Additional land was secured through an appropriation for that purpose

by the last Legislative Assembly, and a plan for the enlargement of the agricultural work inaugurated. For the next biennium money has been requested to complete a dairy barn, put in some drainage and for additional equipment for this work. A request has also been made for a building for laboratory and class work in agriculture and mechanic arts. The total amount requested is \$80,840. Morgan College already provides the school with a number of school and dormitory buildings, about 100 acres of land, considerable equipment and co-operates in the conduct of the work. The plan is to develop as rapidly as possible an institution comparable to the best schools of its kind in the country under the strict supervision and control of the State.

Total Appropriations Required.

The grand total, including the College, Extension Service, men and women county agents, the Experiment Station, the State Board of Agriculture, the Live Stock Sanitary Service, the Eastern Branch and other lines under the control of the State Board of Trustees of the College and the State Board of Agriculture is, for the first year, General Maintenance, \$859,918.39; the second year, General Maintenance, \$827,367.83, and for Land, Buildings, Equipment, etc., \$1,519,900, or a grand total for the two years of \$3,207,186.22. While this is a large sum, it is an investment that will develop and conserve the State's great agricultural and industrial resources and consequently its wealth. More than this, it helps to make efficient citizens able to render the best service. These constitute the greatest asset in any Commonwealth.

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